

## PRODUCT FAMILY SPECIFICATION FOR 1.00 mm PITCH FLAT FLEX CABLE (FFC) (105°C, Sn PLATED)

### Revision List

REVISION	MODIFICATION	DATE
A	First release	2004/07/05
B	Updated specification	2011/09/29
C	Updated specification	2014/02/17
D	Format update	2022/08/27
E	Number of conductors updated	2022/12/08

REVISION: <b>E</b>	ECR/ECN INFORMATION: EC No: <b>731362</b> DATE: <b>2022/12/08</b>	TITLE: <b>PRODUCT FAMILY SPECIFICATION FOR 1.00 mm PITCH FLAT FLEX CABLE (FFC) (105°C, Sn PLATED)</b>	SHEET No. <b>1 of 5</b>
DOCUMENT NUMBER: <b>PS-98267-001</b>	CREATED / REVISED BY: <b>D. GOMEZ</b>	CHECKED BY: <b>M. IMIG</b>	APPROVED BY: <b>J. SMITH</b>

## 1 SCOPE

This specification covers the 1.00 mm center FFC (Flat Flexible Cable) jumper cable, 105°C, using tin plated copper conductor.

## 2 PRODUCT DESCRIPTION

### 2.1 Product name and series number

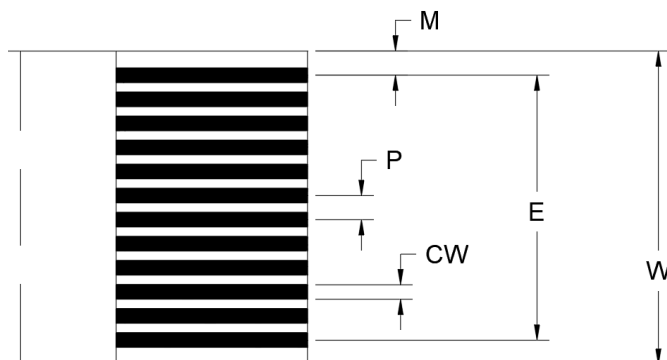
Product name: 1.00 mm PITCH FFC JUMPER CABLE (105°C, Sn PLATED)

Product material no: 98267-XXXX

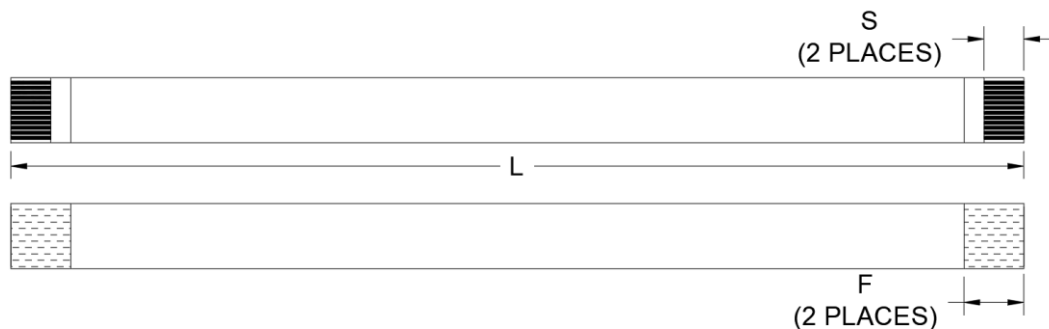
### 2.2 Dimensions, materials, and markings

Product dimensions (in mm) according to SD-98267-001.

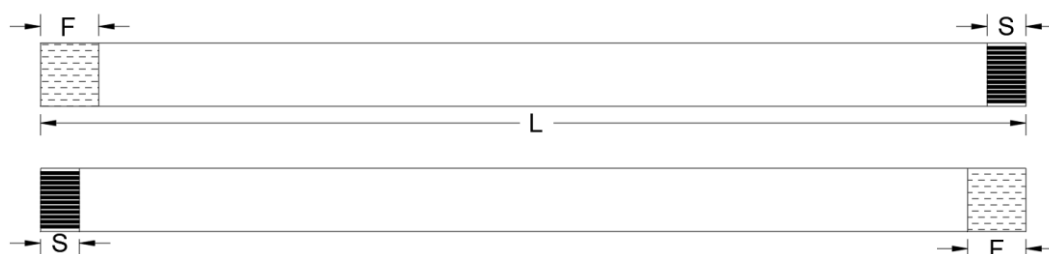
Number of conductors	N	Refer to sales drawing
Pitch	P	1.00 ± 0.08
Span	E	1.00 (N-1) ± 0.15
Total width	W	1.00 (N+1) ± 0.10
Conductor width	CW	0.7 ± 0.03
Margin width	M	1.0 ± 0.20
Strip length	S	4.0 ± 0.80
End thickness of the Connection area	Tc	0.30 ± 0.05
End thickness of the insulated area	Ti	0.22 ± 0.05
Insulated length	L	30 to 60 ± 2.00 61 to 100 ± 3.00 101 to 200 ± 4.00 201 to 999 ± 5.00
Reinforcement length	F	8.00 ± 2.00
End squareness	s-s'	0.40 max.



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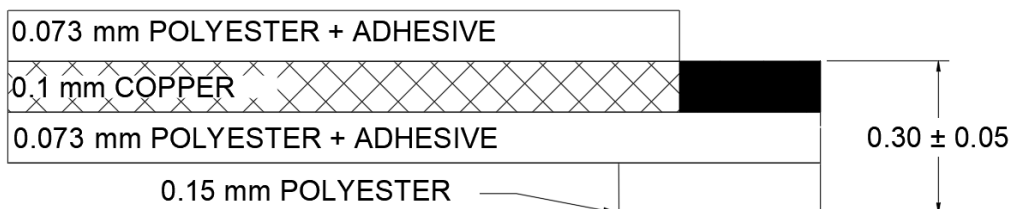
Type A (Contacts on the same side)



Type D (Contacts on the opposite side)

## 2.3 Composition

- FFC Conductor: Material: Copper  
Thickness: 0,10mm  
Plating: 0.4µm Sn min.
- FFC tape: Material: Polyester + Flame retardant adhesive  
Thickness: 0,073mm nominal  
Color: White
- Reinforcement tape: Material: Polyester + Adhesive  
Thickness: 0,15mm nominal



## 2.4 Current and applicable conductors

Conductor Width	Conductor Thickness	Cross section	Current
0.7 mm	0.1 mm	0.07mm <sup>2</sup>	1.25 A


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## 3 ELECTRICAL AND PHYSICAL SPECIFICATIONS

### 3.1 Electrical requirements

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Conductor resistance	ASTM B 193	300 ohms/km MAXIMUM
2	Insulation resistance cond. to cond.	400 V DC	10 Mohms.m MINIMUM
3	Dielectric test	400 V AC for 1 minute	No disruptive discharge
4	Continuity test	3.0 V DC at 0.1mA	passed
5	Voltage rating		60 V AC MAXIMUM
6	Current rating	1.25 A (all conductors under load) at 23°C	Maximum 40°C heat rise
7	Impedance cond/cond balanced method	FFC at 1 MHz	120 $\Omega$ TYP
8	Capacitance cond/cond balanced method	FFC at 1 KHz	50 pF/m

### 3.2 Physical requirements

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
9	Temperature rating		-40°C to +105°C
10	Heat resistance	168 hours at 136°C	Insulation resistance Dielectric test
11	Thermal shock	30 minutes at -55°C 5 minutes at +25°C 30 minutes at +85°C 5 minutes at +25°C	Insulation resistance after 25 cycles
12	Cold coiling	96 hours at -40°C / The sample will be wound on a 3mm dia. Mandrel	Insulation resistance Dielectric test Visual inspection
13	Wear by abrasion	Test following EN3475-503 Weight: 500g Speed: 60 cycles/min Abrasion tool: 0.13mm dia.	10,000 cycles MINIMUM
14	Folding	The specimen shall be folded manually at 180°	Continuity after 20 times
15	Flex Lifecycles	Speed: 100 cycles/min R: 10 mm Temp: 23°C 	100,000 cycles MIN
16	Moisture resistance	96 hours at 60°C, 95% RH	Insulation resistance Dielectric test
17	Flame resistance	UL 758 VW-1	Passed

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18	Solderability	Immersion of the area which is intended for soldering into a tin bath at $250 \pm 10^{\circ}\text{C}$ for 30 seconds	No delamination Solder reflow below 1 mm
19	Insulation elongation	JIS C 2318	60 % MINIMUM
20	Tensile strength	JIS C 2318	32 N/mm <sup>2</sup> MINIMUM

### 4 UL APPROVAL

These products are UL compliant under:

UL style 20706

Temperature rating:  $105^{\circ}\text{C}$

Voltage rating: 60 V AC

### 5 ROHS COMPLIANCE

This Flat Flexible Cable product family is compliant to RoHS Directive (EU) 2015/863.

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